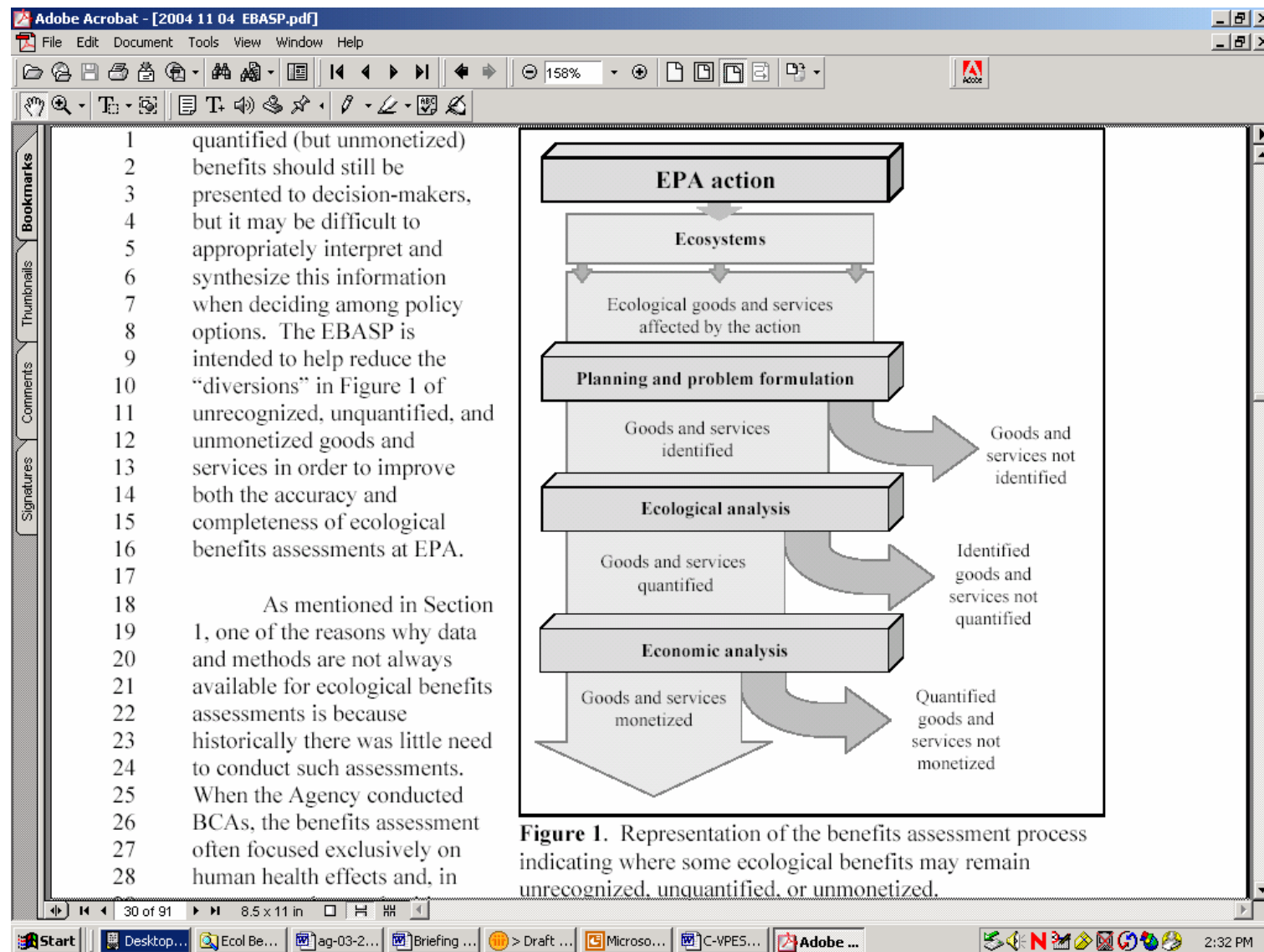


**DIAGRAMS COLLECTED AND DRAFTED FOR  
CONCEPTUALIZING THE RELATIONSHIP OF MODELS  
AND METHODS TO EPA'S NEEDS**

**COLLECTED/DEVELOPED BY MEMBERS OF THE  
STEERING GROUP FOR THE MEETING OF THE SAB  
COMMITTEE ON VALUING THE PROTECTION OF  
ECOLOGICAL SYSTEMS AND SERVICES  
APRIL 12-13, 2005**

"Stylized Representation from an Integrated Ecological Benefits Assessment" from EPA's Draft *Ecological Benefits Assessment Strategic Plan*

"Representation of the benefits assessment process indicating where some ecological benefits may remain unrecognized, unquantified or unmonetized" from EPA's Draft *Ecological Benefits Assessment Strategic Plan*



"Stylized Representation from an Integrated Ecological Benefits Assessment" from EPA's Draft *Ecological Benefits Assessment Strategic Plan*

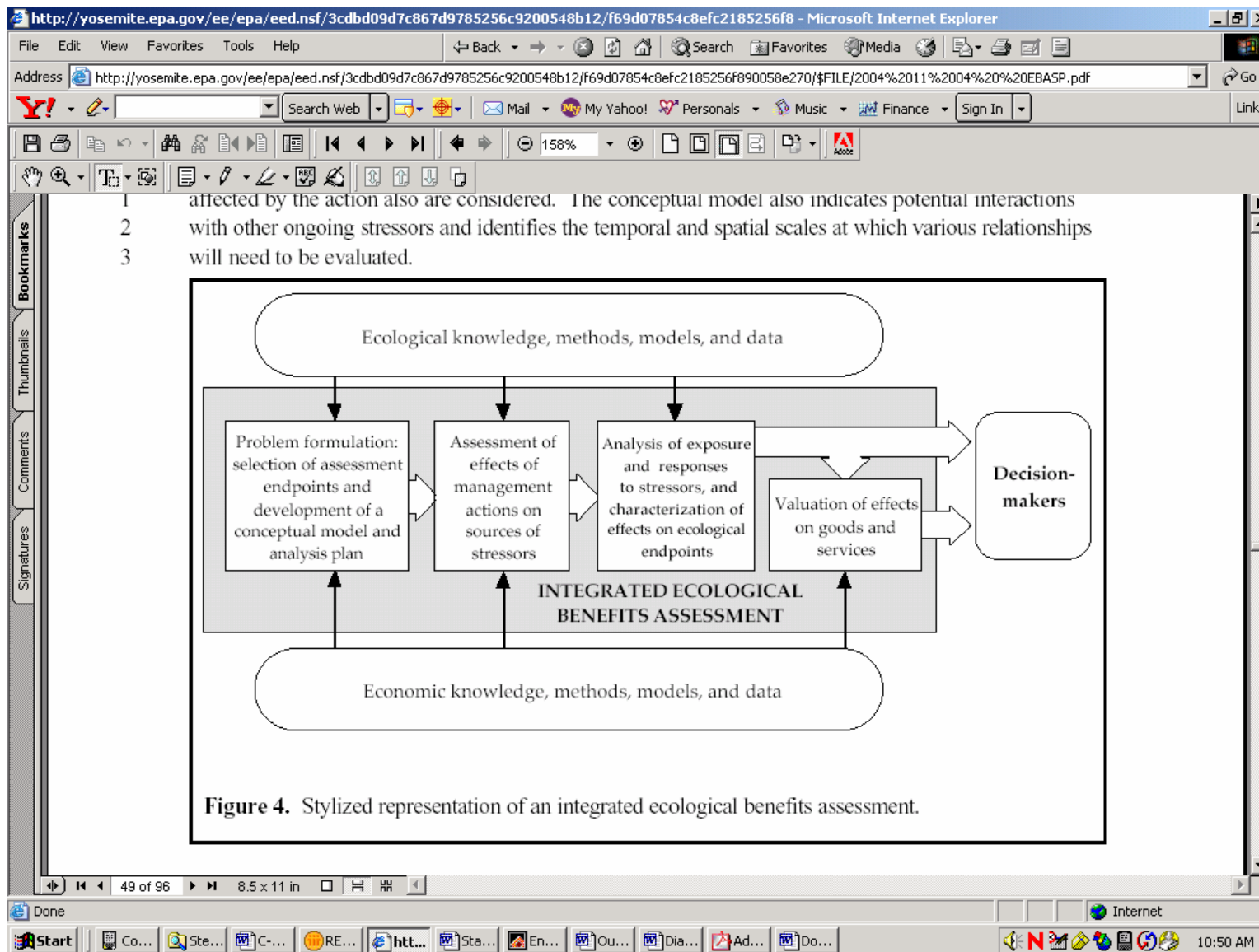
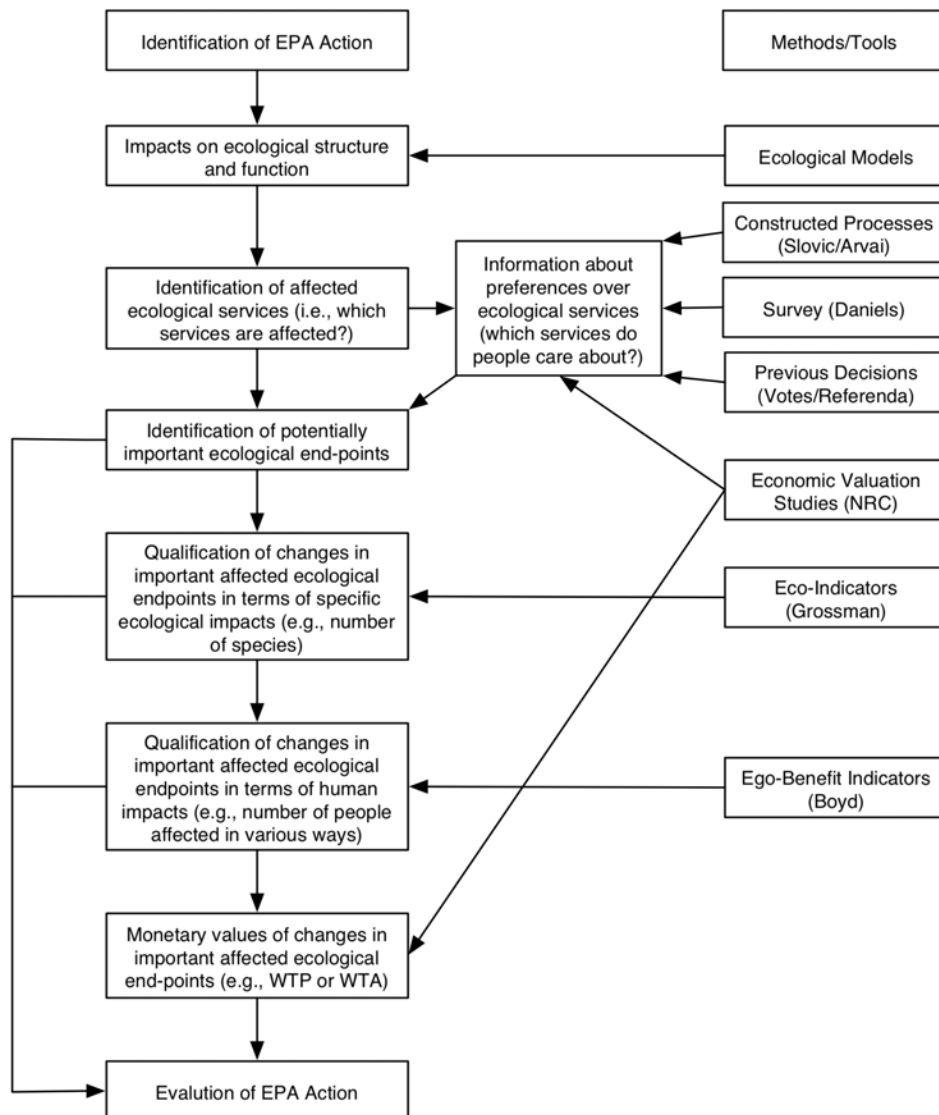


Diagram mapping methods discussed by C-VPESS into process for valuing ecological endpoints



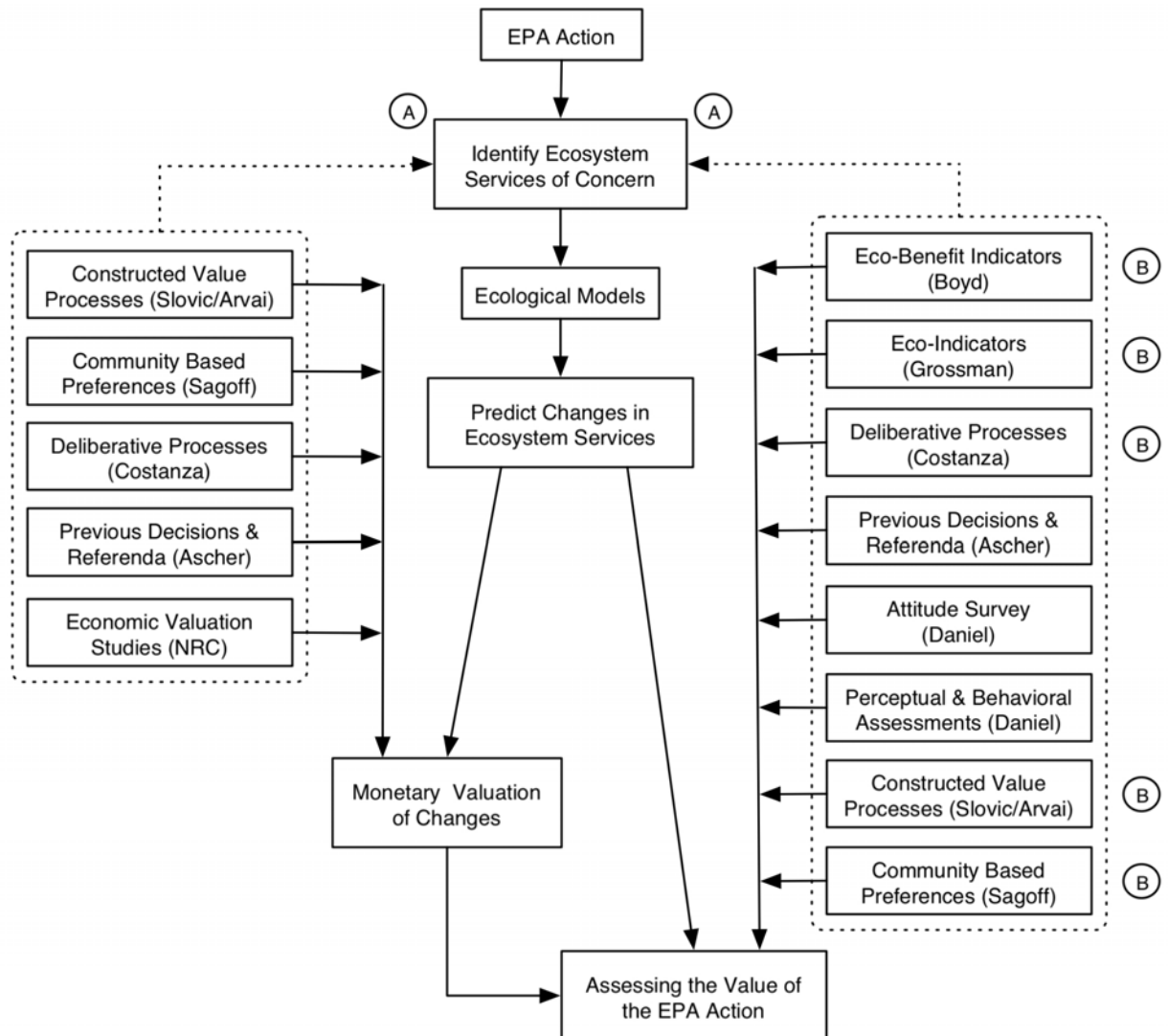
Notes from Kathy Segerson

"I have taken the liberty of suggesting where I see the various 'methods' that people have proposed fitting it, based on my understanding of those methods. Obviously, if we decide to go with something like this, the proposers would have to say where they see their methods fitting.

"I want to emphasize that, in constructing the diagram, I wanted to think about how to evaluate EPA decisions, not how to make a decision, regarding environmental quality. I view valuations as a decision/evaluation aid, which provides input into decisions, not as a decision tool (i.e., a way to make decisions). Thus, I see tools such as group processes, surveys, etc., as a means of providing information, not as a means of making decisions. Although group processes can also be a means for making decisions, in our context I think their role should be viewed as one of informing rather than making decisions."

## How Methods for Valuing ... Can Help Inform or Assess EPA Decisions

### Simplified Version from Freeman



Notes from Rick Freeman:

- A. The arrows from each of the left and right column boxes to this box (Identifying Ecosystem Services of Concern) is meant to indicate the role of some value information in determining which services are of concern (to be valued).
- B. Some versions of these three methods might be used to obtain monetary values. But this is not always the case (for example the British Columbia Water Resources Planning Processes that we heard about last year).

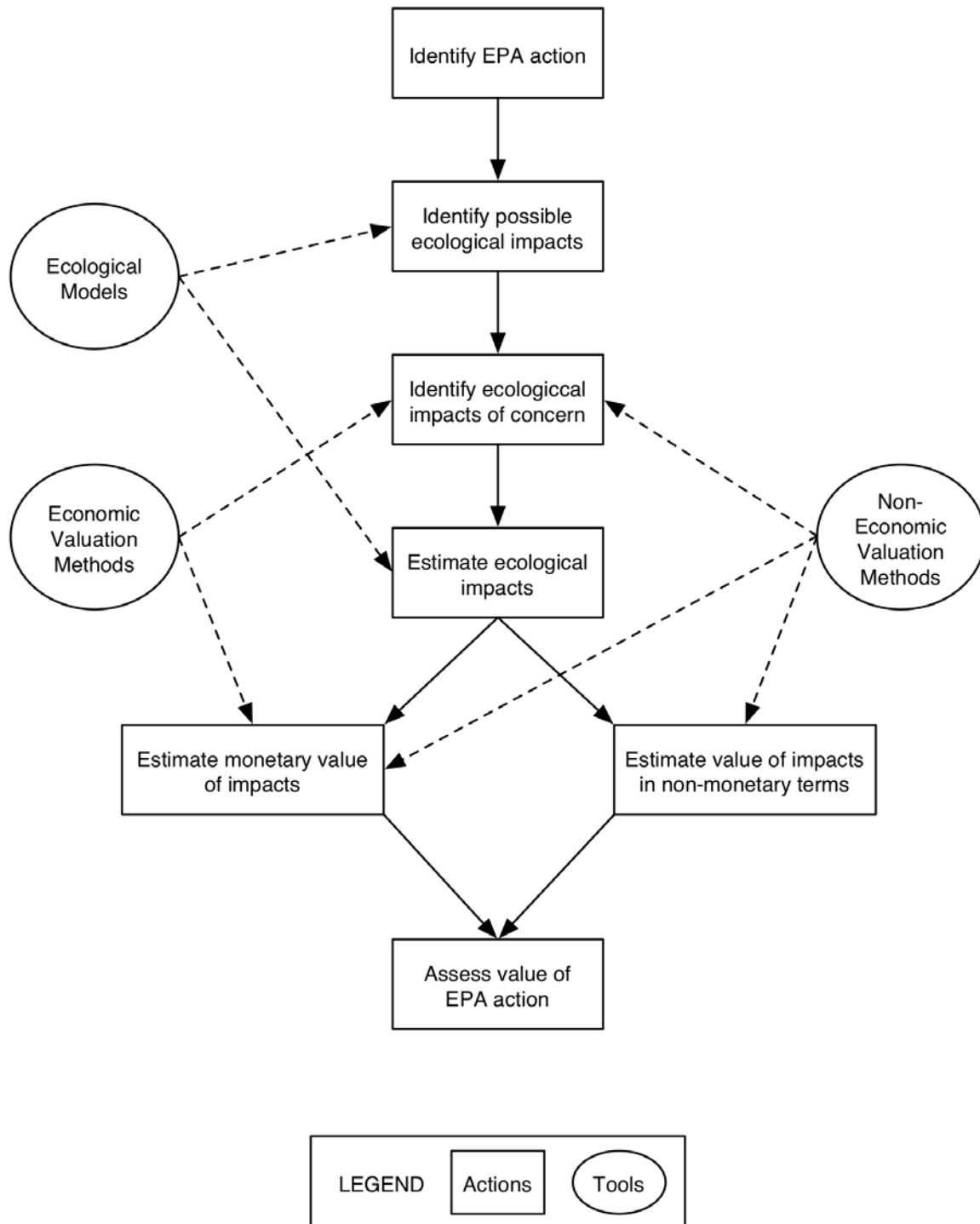
In this version of the diagram, I have tried to do two things:

- Simplify the vertical column to the left in the earlier versions. Those separate boxes are important in some contexts; but they make it more difficult those the roles of the different methods.
- Separate the “Tools and Methods” into those producing monetary values and those that do not.

The text accompanying the figure should explain it by suggesting that the reader pick a methods and then follow the diagram to see where it fits in.

One possible revision to this version is to have separate arrows from each of the left hand and right hand column boxes down to the Monetary Valuation box (for the left hand boxes) or the Assessing the Value box (for the right hand boxes). I didn't do that here because I thought that it would clutter the diagram too much. But it would make it clear that each box/method is an alternative, and it is not that they should all be used together somehow.

Relationship of models and methods for valuing the protection of ecological systems and services to assessment of the value of an EPA decision



## Relationship of models and methods to identification of valued ecological services and systems and their valuation

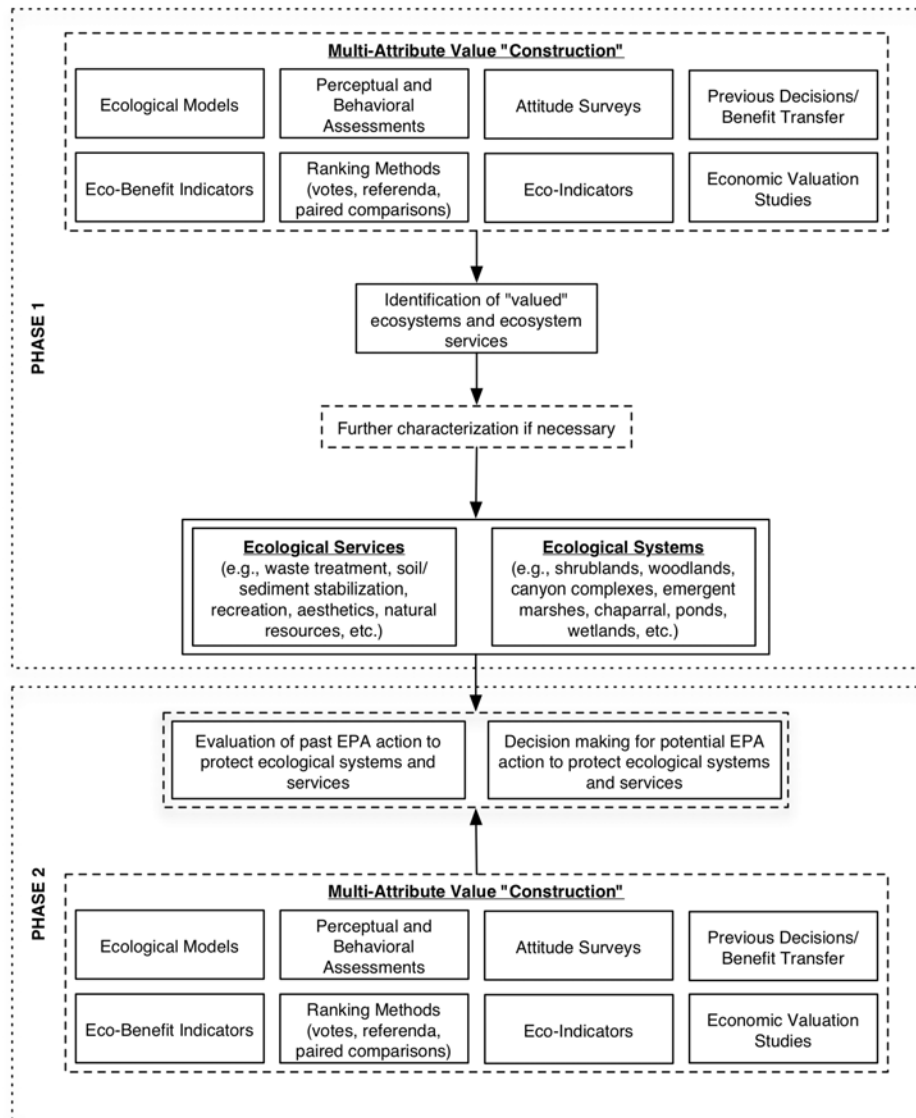




Diagram from SAB Report *Toward Integrated Environmental Decision-Making* (EPA-SAB-EC-00-11) showing "value" information as it relates to generic environmental decision making

### Framework for integrated environmental decision making

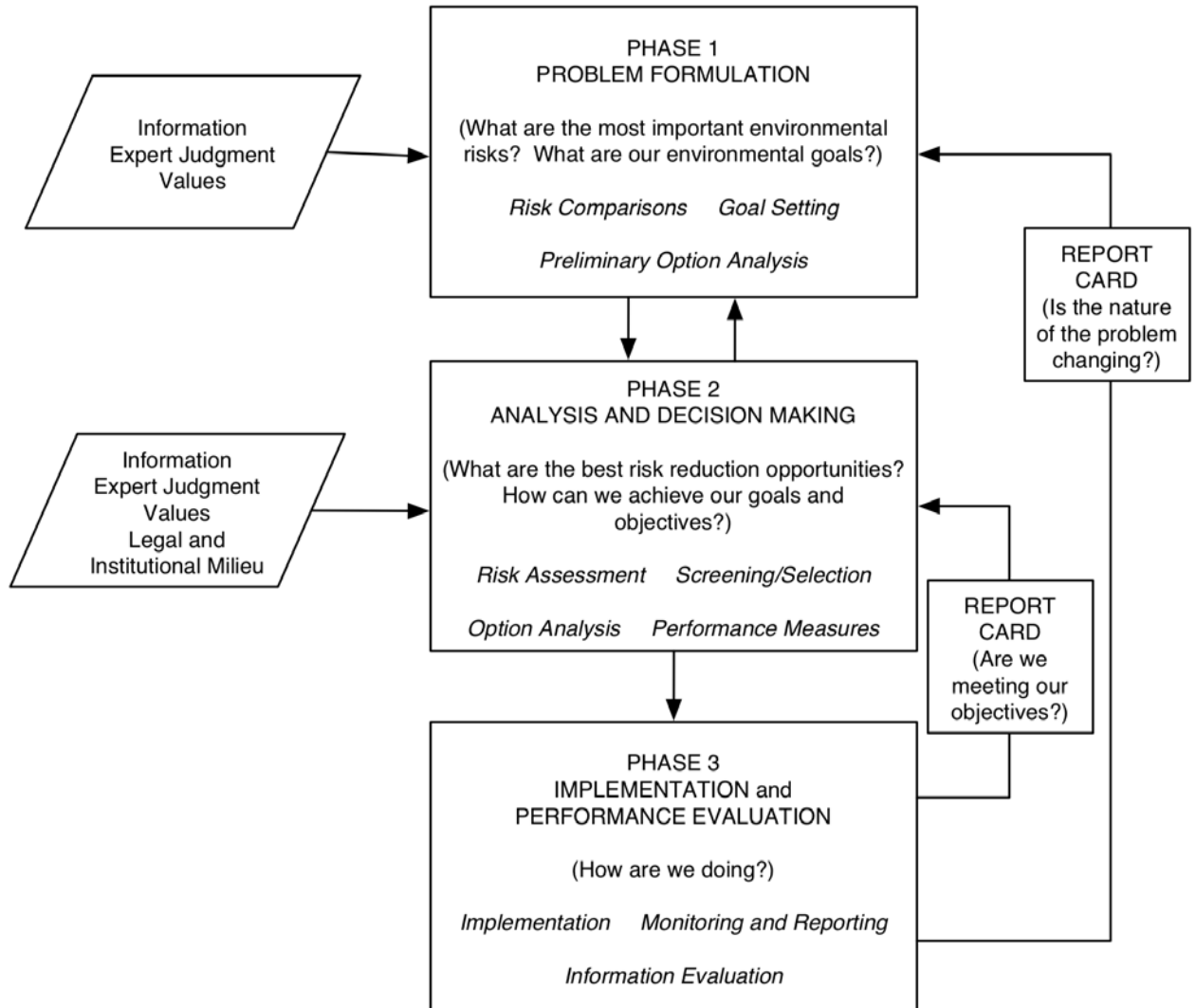


Diagram aiming to show how valuation fits into integrated, iterative environmental decision making.

**Framework for factoring information about values into decision making  
to protect ecological systems and services**

